PETITION OF Food & Water Watch 1616 P Street, NW, Suite 300 Washington, DC 20036 Assateague Coastal Trust 9931 Old Ocean City Boulevard Berlin, MD 21811 FOR JUDICIAL REVIEW OF THE DECISION OF THE Maryland Department of Environment 1800 Washington Boulevard Baltimore, Maryland 21230 IN THE CASE OF NOTICE OF FINAL DETERMINATION General Discharge Permit for Animal Feeding Operations State Discharge Permit: 09AF, NPDES Permit: MDG01	IN THE CIRCUIT COURT FOR ANNE ARUNDEL COUNTY Civil Action No. C-02-CV-14-000786

OPENING BRIEF FOR PETITIONERS FOOD & WATER WATCH AND ASSATEAGUE COSTAL TRUST

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Table of Abbreviations

AFO...Animal Feeding Operation

BMP...Best Management Practices

BPT...Best Practicable Technology

CAFO...Concentrated Animal Feeding Operation

CWA...Clean Water Act

EIP...Environmental Integrity Project

ELG...Effluent Limitation Guideline

EPA...Environmental Protection Agency

GAO...United States Government Accountability Office

GP...General Discharge Permit

MAFO...Maryland Animal Feeding Operation

MDE...Maryland Department of the Environment

MDE - ######...Administrative Record with Page Number

NPDES...National Pollution Discharge Elimination System

TMDL...Total Maximum Daily Load

USDA...United States Department of Agriculture

WIP...Watershed Implementation Plan

WQBEL...Water Quality Based Effluent Limitations

Preliminary Statement

Petitioners request judicial review of Maryland Department of Environment's (MDE) General Discharge Permit for Animal Feeding Operations (State Discharge Permit: 09AF, NPDES Permit: MDG01). Petitioners hereby respectfully request that the Court remand the Permit to MDE with instructions to revise the Permit as necessary to bring it into compliance with governing Federal Regulations.

To ensure those discharges occurring under NPDES permits are in line with the goal of the Clean Water Act (CWA), the CWA and implementing regulations mandate certain minimum requirements that must be included in all NPDES permits. *See* 33 U.S.C. § 1342; 40 C.F.R. Part 122, *EPA Administered Permit Programs: The National Pollutant Discharge Elimination System*. Every NDPES Permit issued by MDE must be in compliance with these minimum federal requirements. 33 U.S.C. § 1342(b)(1)(A); 40 C.F.R. §§ 122.4(a)-(d), 123.25(a). MDE's Permit must adopt requirements at least as stringent as the federal standards. 33 U.S.C. § 1370; Md. Code Ann., Envir. § 9-314(c); *Nw. Land Corp. v. Maryland Dep't of Env't*, 104 Md. App. 471, 479, 656 A.2d 804 (1995) (stating that "MDE's effluent standards must be at least as stringent as the federal standards."). Despite the clear CWA mandate, MDE's General Permit at issue in this case is legally deficient because it fails to comply with several critical federal requirements for NPDES permits.

First, MDE's General Permit is legally deficient because it fails to implement weekly inspections of dry manure impoundments as is required by the Federal Regulations. 40 C.F.R. § 412.37(a)(1). Instead, the General Permit only requires inspections once every three months. General Permit, Part IV.A.6(b)(4), at MDE - 000015. This deficiency is especially troublesome given that one CAFO can produce up to 1.6 million tons of manure a year and that pollution runoff from Maryland's CAFO facilities continue to be a leading contributors to the pollution that impairs the Chesapeake Bay.[1] By failing to meet federal

[1] *Concentrated Animal Feeding Operations: EPA Needs More Information and a Clearly Defined Strategy to Protect Air and Water Quality from Pollutants of Concern*, U.S. Government Accountability Office (Sept. 2008), GAO-08-944, at 18, *available at* http://www.gao.gov/new.items/d08944.pdf; Carrie

standards in this respect, MDE's general permit is legally deficient and must be remanded to the Agency for revision.

Second, MDE's General Permit fails to implement the effluent monitoring required by 40 C.F.R. 122.44(i)(1). Section 122.44(i)(1) requires all NPDES permits to include, when applicable, certain monitoring and reporting requirements designed to "assure compliance with permit limitations…" 40 C.F.R. § 122.44(i)(1). MDE's General Permit incorporates limitations on production areas from both the Federal Effluent Limitations Guidelines (ELGs) and the Chesapeake Bay TMDL but fails to include terms in the permit that will ensure these standards are met. By failing to mandate the monitoring required by 122.44(i)(1), MDE's General Permit is legally deficient. 33 U.S.C. § 1342(a)(1); 40 C.F.R. § 122.4(a), (d); *Assateague Coastkeeper v. Maryland Dep't of Env't*, 200 Md. App. 665, 674-75, 28 A.3d 178, 184 (2011).

Petitioners ask the court to declare invalid MDE's General Permit and remand it to the agency so MDE can adopt a legally sufficient permit that requires weekly visual inspections of all manure, litter, and process wastewater impoundments under 40 C.F.R. § 412.37(a) as well as the effluent monitoring required under 40 C.F.R. 122.44(i).

Hribar, *Understanding Concentrated Animal Feeding Operations and Their Impact on Communities*, National Association of Local Boards of Health (2010), *available at* http://www.cdc.gov/nceh/ehs/docs/understanding_cafos_nalboh.pdf; John Rhoderick, Program Manager of Resource Conversation Operations, *Maryland's TMDL Process and the Role for Agriculture: WIP Phase II Summary* (April/May 2013), *available at* http://www.mde.state.md.us/programs/Water/TMDL/TMDLImplementation/Documents/Regional_Meetings/Spring2013/Agricultural_Progress_and_Assistance.pdf

Factual Background

I. Concentrated Animal Feeding Operations (CAFOs) and Pollution

Over the last several decades, agriculture has changed dramatically, with small farms increasingly replaced by industrial-sized facilities that confine thousands of animals in small, enclosed areas. These operations are called "Animal Feeding Operations" (AFOs). *See* 40 C.F.R. § 122.23(b)(1) ("…a lot or facility…where the following conditions are met: (i) Animals…have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and (ii) Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility."). Concentrated Animal Feeding Operations (CAFOs) are AFOs that meet certain EPA criteria.[2] *See* 40 C.F.R. §§ 122.23(b)(2), 122.23(c). Industry's consolidation and the trends toward larger-sized operations on smaller land areas have resulted in a nearly 20 percent increase in the amount of excess nutrients produced between 1982 and 1997. 68 Fed. Reg. 7176, 7180 (Feb. 12, 2003). Despite improvements in the nation's water quality since the inception of the CWA, agricultural operations, including CAFOs, still account for a significant share of the remaining water pollution problems in the United States. *Id.* at 7181.

Agricultural operations produce an estimated 500 million tons of manure every year – three times the amount of waste produced by humans in the U.S. *Id.* at 7180; 76 Fed. Reg. 65,431, 65433 (Oct. 21, 2011). Individual large farms can generate as much waste as certain U.S. cities.[3] Unlike human waste, however, livestock waste is not treated in municipal wastewater facilities or septic systems before it can re-enter the water. It is stored in manure pits or lagoons and spread onto land. CAFO waste contains

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[2] *AFO (CAFO/MAFO) Webpage*, MARYLAND DEPARTMENT OF THE ENVIRONMENT (last visited April 18, 2015), http://www.mde.state.md.us/programs/Land/RecyclingandOperationsprogram/AFO/Pages/index.aspx ("A CAFO is a medium or large AFO that discharges or "proposes to discharge" manure, litter, or process wastewater. "Proposes to discharge" means that your facility is designed, constructed, operated, or maintained, such that a discharge to surface waters of the State WILL occur.").

[3] *Concentrated Animal Feeding Operations: EPA Needs More Information and a Clearly Defined Strategy to Protect Air and Water Quality from Pollutants of Concern* [hereinafter GAO Report], U.S. Government Accountability Office (Sept. 2008), GAO-08-944, at 19, *available at* http://www.gao.gov/new.items/d08944.pdf.

numerous pollutants that threaten water quality, aquatic life, and public health, including nutrients such as nitrogen, phosphorus, and potassium, pathogens and parasites, heavy metals, and pharmaceuticals such as antibiotics and hormones. 76 Fed. Reg. 65,431, 65,434; 68 Fed. Reg. 7176, 7180-81. These operations impair the water quality in the nation's rivers and lakes when manure overflows from storage lagoons or when manure is over-applied to land. *Id.* Leaking animal waste storage lagoons threaten human health by contaminating groundwater used for drinking water supplies.[4] Consequently, "[e]ffective control of pathogens originating in livestock manure or poultry litter could improve human and ecosystem health through reductions in waterborne disease organisms and chemicals." 76 Fed. Reg. 65,431, 65,434.

According to the U.S. Environmental Protection Agency (EPA), agriculture remains a major source of water pollution.[5] States have identified AFOs specifically as the polluters of almost 20,000 miles of rivers and streams and over 250,000 acres of lakes, reservoirs, and ponds.[6] While livestock waste in appropriate quantities can serve as fertilizer for crops, the sheer number and concentration of animals in CAFOs leads to excessive concentrations of waste.[7] In addition, multiple large farms may be located in a relatively small geographic area, raising additional concerns about the impacts of manure produced, stored, and disposed of by these farms.[8] Moreover, because of the closeness of confinement at CAFOs, the soil can become saturated and dissolved phosphorus losses rapidly increase,[9] causing water quality

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[4] The EPA estimates that 53% of the population relies on groundwater for drinking water, often at much higher rates in rural areas. Carrie Hribar, *Understanding Concentrated Animal Feeding Operations and Their Impact on Communities*, NATIONAL ASSOCIATION OF LOCAL BOARDS OF HEALTH (2010), at 3, *available at* http://www.cdc.gov/nceh/ehs/docs/understanding_cafos_nalboh.pdf.

[5] *Protecting Water Quality from Agricultural Runoff*, EPA (March 2005), *available at* http://water.epa.gov/polwaste/nps/upload/2005_4_29_nps_Ag_Runoff_Fact_Sheet.pdf

[6] *Water Quality Assessment and Total Maximum Daily Loads Information*, EPA (last updated Dec. 13, 2013), http://www.epa.gov/water/ir/.

[7] GAO Report, *supra* note 11, at 5-6.

[8] *Id.*, at 18; Hribar, *supra* note 12, at 3.

[9] Donald Doesch *et al.*, *Why We Need the Phosphorus Management Tool (PMT)* [hereinafter Scientists' PMT Letter], UNIVERSITY SYSTEM OF MARYLAND (Jan. 7, 2014), *available at* http://www.umces.edu/sites/default/files/Why%20We%20Need%20the%20Phosphorus%20Management%20Tool%20Updated.pdf, MDE – 000103 (cited in EIP public comment).

problems by over-stimulating the growth of algae.[10] As soluble soil phosphorus concentrations increase, so does dissolved phosphorus loss in surface runoff and subsurface discharge.[11] Soils with a high degree of phosphorus saturation pose an even greater risk of water pollution.

Most CAFOs collect and store manure prior to its application on farmland or fields. Depending on the type and number of animals in the farm, manure production can range between 2,8000 tons and 1.6 million tons a year.[12] By sector, USDA estimates that poultry operations account for the majority of on-farm excess nitrogen and phosphorus. 68 Fed. Reg. 7176, 7180. This is attributable to the limited land area for manure application and generally higher nutrient content of the poultry manure. *Id.* Poultry manure is gathered into piles and often mixed with material such as wood chips spread on the floor of broiler facilities as "litter." In Maryland, essentially all poultry houses utilize wood shavings or sawdust as bedding material.[13] During bird production, bedding material becomes mixed with urine and fecal material from the birds, resulting in poultry litter.[14] This litter is periodically removed from poultry houses during "total cleanout" and "crust-out," sometimes when there is no immediate use for the litter.[15] The litter is temporarily stored in stockpiles.[16] Poultry manure that has higher water content is stored in lagoons. If not managed properly, poultry manure, which already has generally higher nutrient content, can contribute pollutants to the environment. 68 Fed. Reg. 7176, 7180-81. Manure may spill from holding structures into nearby waterways due to severe weather or poor design or construction. Storage units can break or become faulty, or rainwater can cause stockpiles and holding lagoons to overflow and run off

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[10] *Nitrogen and Phosphorus in Streams in Agricultural Watersheds*, EPA (last updated Feb. 17, 2010), http://cfpub.epa.gov/eroe/index.cfm?fuseaction=detail.viewInd&lv=list.listByAlpha&r=219683&subtop=200.

[11] *Id.*

[12] GAO Report, *supra* note 11, at 18; Hribar, *supra* note 12.

[13] Poultry Litter Experts Forum [hereinafter Poultry Litter Experts Forum], Chesapeake Research Consortium – Maryland Environmental Finance Center Science Forum (Oct. 2008), MDE – 000333-000336 (cited in EIP public comment).

[14] *Id.*

[15] *Id.*

[16] *Id.*

into surface waters.[17] Improperly stockpiled poultry litter dramatically increases the potential for nutrient runoff to the environment.[18] Moreover, while CAFOs are required to have permits, handling large amounts of manure inevitably causes accidental releases.[19]

II. AFOs in Maryland and the Impaired Chesapeake Bay Watershed

Maryland is home to at least 588 CAFOs and Maryland animal feeding operations (MAFOs).[20] According to the U.S. Department of Agriculture, in 2009, Maryland farms grew 1.4 billion pounds of broilers, produced 554 million eggs, and raised 68.8 million pounds of cattle and calves and 15.3 million pounds of hogs.[21] The majority of Maryland farms raise poultry on the Eastern Shore.[22] The heavy concentration of farms and animals increased the statewide agricultural contributions to nitrogen and phosphorus between 2011 and 2012. Significantly, these impacts were particularly dramatic on the Eastern shore.[23]

Perhaps the most pronounced impact is evidenced in the Chesapeake Bay (the "Bay"). The Bay stretches from Havre de Grace, Maryland to Norfolk, Virginia and is the largest estuary in the United States, as well as one of the largest and most biologically productive estuaries in the world.[24] It has been labeled a "national treasure" in which the Federal Government has nationally significant assets; public

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[17] Hribar, *supra* note 12.
[18] *Id.*
[19] *Id.*
[20] A MAFO is a large animal feeding operation that does not discharge or "propose to discharge" manure, litter, or process wastewater. *AFO (CAFO/MAFO) Webpage*, MARYLAND DEPARTMENT OF THE ENVIRONMENT (last visited April 18, 2015), http://www.mde.state.md.us/programs/Land/RecyclingandOperationsprogram/AFO/Pages/index.aspx.
[21] Gary Kelman, *MDE, farmers gain ground in keeping nutrients from Bay waters*, MARYLAND DEPARTMENT OF THE ENVIRONMENT (June 2011), http://www.mde.state.md/us/programs/ResearchCenter/ReportsandPublicationPages/researchcenter/publications/general/eMDE/vol4no10/Article7.aspx.
[22] *Maryland at a Glance: Agriculture*, MARYLAND STATE ARCHIVES WEBSITE (last updated April 13, 2015), http://msa.maryland.gov/msa/mdmanual/01glance/html/agri.html.
[23] John Rhoderick, Program Manager of Resource Conversation Operations, *Maryland's TMDL Process and the Role for Agriculture: WIP Phase II Summary* (April/May 2013), *available at* http://www.mde.state.md.us/programs/Water/TMDL/TMDLImplementation/Documents/Regional_Meetings/Spring2013/Agricultural_Progress_and_Assistance.pdf.
[24] Exec. Order No. 13,508 [hereinafter EXECUTIVE ORDER], 74 Fed. Reg. 23099, 23099 (May 12, 2009).

lands, facilities, military installations, parks, forests, wildlife refuses, monuments, and museums.[25] Its unique ecosystem contains more than 1,500 square miles of wetlands that provide the critical habitat for fish, shellfish, and wildlife.[26] Despite recognition of its national and environmental importance, most of the Bay and its tidal waters are listed as impaired waters due to excess nitrogen and phosphorus levels. In 1975, the Bay became the Nation's first estuary to be targeted for protection and restoration when Congress directed EPA's Office of Research and Development to initiate a study investigating the causes of observed environmental declines.[27]

Nutrient pollution, specifically nitrogen and phosphorus, discharged into the Bay and its tributaries is one of the main causes of the Bay's continued poor health. These pollutants cause algae blooms that consume oxygen and create "dead zones" where fish and shellfish cannot survive, block sunlight that is needed for underwater Bay grasses, and smother aquatic life on the floor of the Bay. As identified through monitoring and assessment of nutrient inputs, many surface waters in Maryland are impaired by excessive inputs of nutrient and sediment, which stimulate algal growth and decrease water clarity and deplete dissolved oxygen levels.[28]

Animal agriculture remains the largest source of phosphorus inputs to the Bay.[29] While phosphorus inputs to the Bay from wastewater have declined by 70% since 1985, inputs from agricultural sources have remained relatively unchanged.[30] Agricultural sources are estimated to account for approximately 64% of the phosphorus that enters the Bay as a result of human activities, surpassing the amount coming from wastewater discharges or urban stormwater runoff.[31] Animal agriculture in

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[25] *Id.*
[26] *Chesapeake Bay*, U.S ENVIRONMENTAL PROTECTION AGENCY (last updated Oct. 28, 2014), http://www.epa.gov/oaqps001/gr8water/xbrochure/chesapea.html.
[27] *Id.*
[28] Scientists' PMT Letter, *supra* note 17, at MDE – 000103.
[29] *Id.*; Chesapeake Bay Program, Phase 5.3.2 Model, at MDE – 000114 (cited in Chesapeake Bay Foundation public comment).
[30] Scientists' PMT Letter, *supra* note 17, at MDE – 000103.
[31] *Id.*

particular contributes 19% of the nitrogen and 26% of the phosphorus in the Bay.[32] In Maryland, agriculture accounts for 38% of the nitrogen loading and 52% of phosphorus loading to the Bay.[33]

III. The Bay "Pollution Diet"

The CWA sets the overarching environmental goal that all waters of the United States are fishable and swimmable, but "[d]espite significant efforts by Federal, State, and local governments and other interested parties, water pollution in the Chesapeake Bay prevents the attainment of existing State water quality standards and the "fishable and swimmable" goals of the Clean Water Act."[34] Prompted by insufficient progress and continued poor water quality despite extensive restoration efforts, the EPA established the Chesapeake Bay Total Maximum Daily Loads (TMDL), a "historic and comprehensive "pollution diet" with rigorous accountability measures to initiate sweeping actions to restore clean water in the Chesapeake Bay and the region's streams, creeks, and rivers."[35] The TMDL – the largest ever developed by EPA – is required under the CWA and is a keystone commitment of the federal strategy to meet the Executive Order renewing the commitment to reduce Bay pollution.[36]

The Bay TMDL is designed to ensure that pollution control measures needed to fully restore the Bay are in place by 2025, with at least 60% of the actions completed by 2017. Its pollution limits are divided by jurisdiction and major river basin. Watershed Implementation Plans (WIPs) detail how and when each of the six Bay states and the District of Columbia will meet pollution allocations. To meet the TMDL, Maryland submitted a plan to EPA committed to reducing 248,000 pounds-per-year of nitrogen

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[32] Nonpoint Source Pollution Office of Wetlands, Oceans, and Watersheds, U.S. EPA, EPA841-R-10-002, *Guidance for Federal Land Management in the Chesapeake Bay Watershed* 204 (May 12, 201), *available at* http://water.epa.gov/polwaste/nps/upload/chesbay_chap02.pdf, at MDE – 000114 (cited in Chesapeake Bay Foundation public comment).

[33] Chesapeake Bay Program, Phase 5.3.2 Model, at MDE – 000114 (cited in Chesapeake Bay Foundation public comment).

[34] EXECUTIVE ORDER, *supra* note 32, at 23099.

[35] Chesapeake Bay TMDL Executive Summary (Dec. 29, 2010), ES-1, *available at* http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/FinalBayTMDL/BayTMDLExecutiveSummaryFINAL122910_final.pdf.

[36] *See* EXECUTIVE ORDER, *supra* note 32, at 23099.

and 41,000 pounds-per-year of phosphorus from all AFOs by 2025.[37] It is estimated that additional reductions of 5.2 million pounds of phosphorus per year is required Bay-wide, and Maryland still must reduce 0.7 million pounds per year to achieve the load limit under the state's WIP.[38] That plan specifically requires reductions from agriculture for more than one-half of that total.[39] Despite these goals, nitrogen and phosphorus loads in Maryland have *increased*.[40]

IV. MDE's General Discharge Permit

The Maryland Department of the Environment (MDE) has acknowledged the significant problems agriculture creates for the environment: "To restore the Chesapeake Bay and its tributaries, Maryland must control all significant sources of nitrogen and phosphorus that are polluting the Chesapeake Bay…with the largest animal producers being one of the major sources of nitrogen and phosphorus from agriculture."[41] Pursuant to its delegated authority to issue NPDES permits under the Clean Water Act, MDE renewed its General Discharge Permit for AFOs, which had been in effect since December 1, 2009 and expired on November 30, 2014. The new General Discharge Permit (NPDES Permit #MDG01, State Discharge Permit #14AF) became effective on December 1, 2014 after a public participation process.[42] MDE's General Permit also applies to Maryland Animal Feeding Operations

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[37] Maryland's Phase II Watershed Implementation Plan for the Chesapeake Bay TMDL, at 13, tbl.3 & 16, tbl.4 (Oct 26, 2012).
[38] *Id.*
[39] *Id.*
[40] *Id.*
[41] Ben Grumbles, *Facts About…Animal Feeding Operations (AFOs) Permitting Process, Frequently Asked Questions*, Maryland Department of the Environment (Jan. 28, 2015), http://www.mde.state.md.us/programs/Land/RecyclingandOperationsprogram/AFO/Documents/CAFO%20FAQs%20on%20Template%202.2.15.pdf.
[42] This participation process consisted of the publication of a Tentative Determination on September 5, 2014, a public hearing on October 14, 2014, a written comment period ending October 20, 2014, and the publication of a Final Determination on MDE's website and in the Delmarva Farmer, Salisbury Daily Times, Record Observer, and the Frederick News Post once per week for two consecutive weeks starting November 25, 2014. *AFO (CAFO/MAFO) Webpage*, Maryland Department of the Environment (last visited April 28, 2014), http://www.mde.state.md.us/programs/Land/RecyclingandOperationsprogram/AFO/Pages.index.aspx .

(MAFOs),[43] which are thus similarly required to obtain a State discharge permit and comply with permit obligations. *See* Permit Part I.A.4.

Statutory and Regulatory Framework

In 1972, Congress enacted the Clean Water Act in an effort "to restore and maintain the chemical, physical and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). To achieve this goal, the CWA expressly prohibits the "discharge of pollutants"[44] from any "point source"[45] to "water of the United States,"[46] except when in compliance with a permit issued under the National Pollution Discharge Elimination System (NPDES) program, and sections 301, 302, 307, 308, and 402 of the CWA. 33 U.S.C. §§ 1311, 1342, 1362; 40 C.F.R. § 401.12(a). The U.S. Environmental Protection Agency (EPA) administers the NPDES Program, although the CWA provides for delegation of authority to the states. 33 U.S.C. §§ 1251(d), 1342(a)(5); 40 C.F.R. § 123.25(a). To be in compliance with the CWA, a delegated state must implement all aspects of the NPDES program, including issuing permits that conform to federal standards. 33 U.S.C. § 1342(b)(1)(A); 40 C.F.R. § 122.4(a) ("No permit may be issued when the conditions of the permit do not provide for compliance with the applicable requirements of CWA, or regulations promulgated under CWA.")(Internal punctuation omitted); 40 C.F.R. § 123.25 ("All State Programs…must be administered in conformance with [promulgated regulations], except that States are not precluded from omitting or modifying provisions to impose more stringent requirements."). Maryland administers the federal NPDES program and issues federally enforceable discharge permits in the State. *See Howard County v. Davidsonville Area Civic and Potomac River Ass'ns, Inc.*, 72 Md.App. 19, 625 A.2d 772, 774 n.3 (MD 1987).

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[43] Because CAFOs and MAFOs are subject to the same permit limitations, they will be referred to collectively as "CAFOs." By definition, however, a MAFO is any animal feeding operation that, while not meeting other CAFO criteria, does meet the "large" size category threshold for AFOs. *See* Permit Part 1.A.4.

[44] "Discharge of a pollutant" means any "addition of a pollutant to navigable waters from any point source." 33 U.S.C. § 1362(12). "Pollutant" is defined to include "industrial, municipal, and agricultural waste discharged into water." 33 U.S.C. § 1362(6).

[45] A point source is "any discernible, confined and discrete conveyance…" 33 U.S.C. § 1362(14).

[46] Navigable waters are broadly defined as "the waters of the United States." 33 U.S.C. § 1362(7).

Under the implementing Regulations, AFOs that meet certain criteria are designated "Concentrated Animal Feeding Operations" (CAFOs), and CAFOs are specifically designated as point sources under the CWA. 33 U.S.C. § 1362(14); 40 C.F.R. § 122.23. CAFOs were designated as point sources because Congress recognized the increasing amounts of waste generated by these intensive livestock production facilities.[47] Accordingly, a CAFO located in Maryland cannot discharge unless authorized to do so by a valid NPDES permit issued by the state. 40 C.F.R. § 122.23(d)(1).

I. NPDES Permits Must Implement All Applicable Federal Requirements

To ensure those discharges authorized by NPDES permits are in line with the goal of the CWA, the CWA and implementing regulations mandate certain minimum requirements that must be included in all NPDES permits. 33 U.S.C. § 1342; 40 C.F.R. Part 122, *EPA Administered Permit Programs: The National Pollutant Discharge Elimination System.* MDE's General Permit must implement all applicable aspects of the CWA, including all applicable effluent limitation guidelines and performance standards (ELGs) required by the Federal NPDES program. 33 U.S.C. § 1342(b)(1)(A); 40 C.F.R. §§ 122.4(a), 123.25. ELGs are national regulations that establish limitations on the discharge of pollutants by industrial category and subcategory. MDE – 000460. ELGs are based on the degree of control that can be achieved using various levels of pollution control technology. *Id.* ELGs may be numeric limitations or nonnumeric limitations in the form of performance standards and best management practices. *Id.* If MDE's General Permit authorizes discharges, those discharges must comply with applicable water quality standards. 33 U.S.C. § 1342(a)(1); 40 C.F.R. § 122.4(d) ("No permit may be issued when the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States.")(Internal punctuation omitted); *Assateague Coastkeeper*, 200 Md. App. 665, 674-75. While Maryland is authorized to adopt more stringent requirements in its state program, its standards may not be less stringent than federal standards established under the Clean Water Act. 33 U.S.C. § 1370; Md. Code Ann., Envir. § 9-314(c); *See also*

[47] *See* Statement of Senator Robert Dole, S.Rep. No. 92–414, at 100 (1972), *reprinted in* 1972 U.S.C.C.A.N. 3668, 3761 cited by *Assateague Coastkeeper v. Alan & Kristin Hudson Farm*, 727 F. Supp. 2d 433, 435-36 (D. Md. 2010)].

Nw. Land Corp. v. Maryland Dep't of Env't, 104 Md. App. 471, 479 (1995) (stating that "MDE's effluent standards must be at least as stringent as the federal standards."). MDE's General Permit must be in compliance with all federal requirements. 33 U.S.C. § 1342(b)(1)(A); 40 C.F.R. §§ 122.4(a), (d),123.25(a).

Thus, Maryland's regulations allow MDE to issue or reissue an NPDES permit for discharges to waters of the state only "upon a determination that… [t]he discharge or proposed discharge specified in the application is or will be in compliance with all applicable requirements of… [e]ffluent limitations [and] [s]urface and ground water quality standards…." Md. Code Regs. 26.08.04.02.A(1). Maryland courts have affirmed that MDE must apply these provisions in issuing an NPDES permit. *See Nw. Land Corp.* 104 Md. App. 471, at 479 (discussing Md. Code Ann., Envir. § 9-324); *See also Assateague Coastkeeper*, 200 Md. App. at 665 (discussing Md. Code Ann., Envir. § 9-324 and Clean Water Act §§ 301(a) and 402(a)(1)).

(a) Permits must implement EPA's "Zero Discharge" Performance Standard

Importantly, the CWA authorized the EPA to promulgate technology-based ELGs for point sources based on the application of "best practicable control technology" (BPT). 33 U.S.C. § 1311(b)(1)(A); 40 C.F.R. § 401.12(b). All NPDES permits must include effluent limits at least as strict as the ELGs promulgated by EPA. 33 U.S.C. § 1342(a); 40 C.F.R. § 122.44(a)(1) ("In addition…each NPDES permit shall include conditions meeting the following when applicable…*Technology-based effluent limitations and standards* based on effluent limitations and standards promulgated under section 301 of the CWA…")(no emphasis added); 40 C.F.R. § 122.4(d) ("No permit may be issued when the conditions of the permit do not provide for compliance with the applicable requirements of CWA, or regulations promulgated under CWA.")(Internal punctuation omitted); *See also* Note to 40 C.F.R. § 123.25.

As authorized by 33 U.S.C. § 1311(b)(1)(A), the EPA promulgated a "Zero Discharge" effluent

limitation for CAFO "production areas"[48] that prohibits any discharge of manure, litter, or process wastewater from the production area of a CAFO into the waters of the United States. 40 C.F.R. § 412.43(a)(1). *See Also* 39 Fed. Reg. 5,704 (Feb. 14, 1974) ("The regulation promulgated below is a Performance standard of "no discharge" subject to an exception for discharges attributable to unusual rainfall events.") The only exception to this Zero Discharge effluent limitation is when there is a discharge as a result of a "25-year, 24-hour rainfall event." *Assateague Coastkeeper,* 200 Md. App. 665, 674-75, citing 40 C.F.R. §§ 412.43(a)(1), 412.2(i). Maryland's General Permit includes this effluent limitation almost verbatim, and adds "This permit does not authorize discharges of pollutants to surface waters during dry weather conditions from…production areas." General Permit Part B.1-4, at MDE – 000005.

(b) Permits must result in discharges that comply with applicable water quality standards.

The CWA also requires states to develop water quality standards for bodies of water within their boundaries. 33 U.S.C. § 1313(c)(2)(A) (requiring standards sufficient to "protect the public health or welfare, enhance the quality of water and serve the purposes of this Act"). Every NPDES permit must ensure that permitted discharges comply with all applicable water quality standards for the body of water that receives the discharge. 33 U.S.C. § 1342(a)(1); 40 C.F.R. § 122.4(d) ("No permit may be issued when the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States.")(Internal punctuation omitted). When the technology-based effluent limitations promulgated by the EPA are not sufficient to implement the applicable water quality standard, the NPDES permit must include any more stringent "water quality based effluent

[48] "*Production area* means that part of an AFO that includes the animal confinement area, the manure storage area, the raw materials storage area, and the waste containment areas. The animal confinement area includes but is not limited to open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milkrooms, milking centers, cowyards, barnyards, medication pens, walkers, animal walkways, and stables. The manure storage area includes but is not limited to lagoons, runoff ponds, storage sheds, stockpiles, under house or pit storages, liquid impoundments, static piles, and composting piles. The raw materials storage area includes but is not limited to feed silos, silage bunkers, and bedding materials. The waste containment area includes but is not limited to settling basins, and areas within berms and diversions which separate uncontaminated storm water. Also included in the definition of production area is any egg washing or egg processing facility, and any area used in the storage, handling, treatment, or disposal of mortalities." 40 C.F.R. § 122.23(b)(8).

limitations" (WQBELs) necessary to achieve the applicable water quality standard. 33 U.S.C. § 1311(b)(1)(C); 40 C.F.R. 122.44(d)(1)(In addition…each NPDES permit shall include conditions meeting the following requirements when applicable…any requirements in addition to or more stringent than promulgated effluent limitations guidelines or standards necessary to achieve water quality standards…including State narrative criteria for water quality.")(Internal punctuation omitted); *See also Maryland Dep't of the Env't v. Riverkeeper*, No. 2199 SEPT.TERM 2013, 2015 WL 1510556, at *1-5 (Md. Ct. Spec. App. Apr. 2, 2015).

The Chesapeake Bay Total Maximum Daily Load (Bay TMDL) establishes the applicable water quality standards for the entire Chesapeake Bay region. The EPA's Bay TMDL set the water quality standard, set the Final Target Loads that the Bay could withstand and still meet that standard, and set 2025 as the deadline for implementation of the Final Target Loads.[49] However, Maryland committed to achieving these goals by 2020.[50] The Bay TMDL also mandates achievement of Interim Target Loads equal to 60% of the Final Target Loads by 2017.[51]

Maryland was then required to develop a "Watershed Implementation Plan" (WIP) that established WQBELs designed to bring the quality of Maryland's waters in to compliance with the EPA's Bay TMDL by 2020.[52] The WIP established specific effluent discharge reductions that must be realized by each category of point source in order achieve the Final Target Loads.[53] Maryland's most recent WIP established statewide Final Target Loads for all point sources that require a 22% reduction for nitrogen and a 14.9% reduction for phosphorus by 2020.[54] The WIP also establishes aggressive Interim Target Loads that aim to achieve 89% of the Final Target Load for nitrogen, 119% of the Final

[49] Maryland's Phase I Watershed Implementation Plan for the Chesapeake Bay Total Maximum Daily Load, at ES-1 (Dec. 3, 2010).
[50] *Id*, at ES-3.
[51] *Id.*
[52] *Id.*
[53] *Id.*, at ES-2.
[54] Maryland's Phase II Watershed Implementation Plan for the Chesapeake Bay Total Maximum Daily Load, at iii (Oct. 26, 2012).

Target Load for phosphorus, and 409% of the Final Target Load for sediment by 2017.[55]

The WIP also sets very specific effluent limitations for CAFOs that must be attained in order to bring Maryland's waters into compliance with Maryland's WIP Final Target Loads and the Bay TMDL. Maryland determined that CAFOs and AFOs combined must achieve Final Target Loads of 619,000 pounds per year for nitrogen and 90,000 pounds per year for phosphorus by 2020.[56] To achieve these 2020 Final Target loads, CAFOs and AFOs must reduce nitrogen discharge by 34.1% and phosphorus discharge by 51.8% from 2010 levels.[57]

Implementing all applicable federal minimum requirements is essential to ensure those discharges occurring under NPDES permits are in compliance with the CWA, the promulgating Regulations, and the applicable water quality standards. Every NDPES Permit issued by MDE must be in compliance with these minimum federal requirements. 33 U.S.C. § 1342(b)(1)(A); 40 C.F.R. §§ 122.4(a)-(d), 123.25(a). MDE's Permit must include, *inter alia,* the proper manure inspection schedule and a monitoring program that assures compliance with water quality standards as required by the Regulations. MDE's General Permit is legally deficient if it fails to comply with federal requirements for NPDES permits. 33 U.S.C. § 1342(b)(1)(A); 40 C.F.R. §§ 122.4(a)-(d), 123.25(a).

II. Requirements for Seeking Judicial Review

A final determination by MDE to issue or renew a water pollution permit "is subject to judicial review at the request of any person that... [m]eets the threshold standing requirements under federal law; and... [p]articipated in a public participation process through the submission of written or oral comments...." Md. Code Ann., Envir. § 1-601 (2009).

"Judicial review shall be on the administrative record before the Department and limited to objections raised during the public comment period, unless the petitioner demonstrates that: (i) [t]he objections were not reasonably ascertainable during the comment period; or (ii)

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[55] *Id.*, at 11.
[56] *Id.*, at 13, 16.
[57] *Id.*, at 13, 16.

[g]rounds for the objections arose after the comment period." *Id.* § 1-601(d). The administrative record must be compiled by MDE, and is limited to those documents listed in § 1-606(c), namely, in relevant part: the permit application and supporting data; the draft permit; the fact sheet explaining the basis for the permitting determination; all documents referenced in the fact sheet explaining the basis for the determination; all documents (except documents for which disclosure is precluded by law or that are subject to privilege) contained in the supporting file for the draft permit; public comments submitted during the public comment period; transcripts of any public hearings held on the application; and any response to comments.

Statement of Jurisdiction

I. Petitioners Participated in the Public Participation Process

Petitioners Food & Water Watch and Assateague Coastal Trust filed timely comments during the public participation process on October 20, 2014. MDE – 000100.

II. Petitioners' Request Was Timely

The timeliness of Petitioners' request for judicial review is dictated by Md. Rules § 7-203, which requires that "a petition for judicial review shall be filed within 30 days after…the date of the order or action of which review is sought." Md. Rules § 7-203. Petitioners filed for judicial review on December 24, 2014, within 30 days from MDE's final determination on December 1, 2014, to renew, with revisions, the General Permit.

Standard of Review

The court reviews an agency decision at two levels: "first, to determine whether the record contains substantial evidence to support the agency decision and second, to determine whether the decision is legally correct." *Riverkeeper*, No. 2199 SEPT.TERM 2013, 2015 WL 1510556, at *8 (Md. Ct. Spec. App. Apr. 2, 2015) (citation omitted). Generally, a reviewing court should respect the expertise of an agency in its own field. *Board of Phys. Quality Assur. v. Banks,* 354 Md. 59, 69, 729 A.2d 376 (1999)

(citations omitted). However, the court owes no deference to an agency "whose conclusions have gone unsupported by competent and substantial evidence, or where the agency draws impermissible or unreasonable inferences and conclusions from undisputed evidence." *Riverkeeper*, No. 2199 SEPT.TERM 2013, 2015 WL 1510556, at *8 (Md. Ct. Spec. App. Apr. 2, 2015) citing *Stansbury v. Jones,* 372 Md. 172, 184, 812 A.2d 312 (2002) (Internal quotations omitted). Additionally, the court is "under no constraints in reversing an administrative decision which is premised solely on an erroneous conclusion of law." *Riverkeeper*, No. 2199 SEPT.TERM 2013, 2015 WL 1510556, at *8 (Md. Ct. Spec. App. Apr. 2, 2015) (citation omitted). When an administrative agency applies an erroneous legal standard, the appropriate remedy is to remand the matter to the agency with instructions to complete its action on remand using the correct standard. *Belvoir Farms Homeowners Ass'n, Inc. v. North,* 355 Md. 259, 270, 734 A.2d 227 (1999).

Argument

I. The General Permit is legally deficient because it fails to require weekly inspections of all manure, litter, and process wastewater impoundments as required by 40 C.F.R. § 412.37(a)(1).

MDE's General Discharge Permit does not meet even the minimum requirements for CAFOs under the relevant federal regulations governing NPDES permits. Namely, although the Permit requires weekly inspections of *liquid* animal waste operations, it only requires visual inspections every three-months for *dry* animal waste operations. Permit Part IV.A.6(b)(4). This violates 40 C.F.R. § 412.37(a)(1)(iii), which plainly requires: "Weekly inspections of the manure, litter, and process wastewater impoundments." 40 C.F.R. § 412.37(a)(1)(iii). There is no distinction anywhere within the federal regulations governing CAFOs to suggest there is a difference in inspection requirements between liquid operations and dry operations. First, the usage of "manure, litter, and process wastewater" throughout the federal regulations consistently refers to both liquid and dry animal waste operations. Second, MDE's interpretation is inconsistent with the underlying purpose of the ELGs in ensuring proper storage of manure, litter, and process wastewater to achieve the Zero Discharge effluent limitation for the production area.

(a) The NPDES CAFO regulations require weekly visual inspections and record keeping for manure, litter, and process wastewater impoundments.

The NPDES regulations identify record keeping, monitoring, and reporting requirements that are applicable to all CAFOs. *See* 40 C.F.R. §§ 122.41,122.42(e)(2)-(4). Additionally, the CAFO Effluent Limitations Guidelines (ELG) identify specific requirements for daily and weekly visual inspections of specific aspects of the production area and requirements associated with land application. *See* 40 C.F.R. §§ 412.37, 412.47. The EPA sets the effluent limitations attainable by the application of best practicable control technology currently available (BPT) as *zero* for the production area: "…there must be no discharge of manure, litter, or process wastewater into waters of the U.S. from the production area." 40 C.F.R. § 412.31(a). Pollutants from the production area may only be discharged "Whenever precipitation causes an overflow of manure, litter, or process wastewater" provided that (i) "The production area is

designed, constructed, operated and maintained to contain all manure, litter, and process wastewater, including the runoff and the direct precipitation from a 25-year, 24-hour rainfall event," and (ii) "The production area is operated in accordance with the additional measures and records required by § 412.37(a) and (b)." 40 C.F.R. § 412.31(a)(1)(i)-(ii).

With regard to the production area specifically, 40 C.F.R. § 412.37(a)(1) requires each CAFO, whether dry or liquid waste operations, to implement routine visual inspections. At a minimum:

> (i) Weekly inspections of all storm water diversion devices, runoff diversion structures, and devices channeling contaminated storm water to the wastewater and manure storage containment structure;
>
> (ii) Daily inspection of water lines, including drinking water or cooling water lines;
>
> (iii) *Weekly inspections of the manure, litter, and process wastewater impoundments; the inspection will note the level in liquid impoundments as indicated by the depth marker in paragraph (a)(2) of this section.*"

40 C.F.R. § 412.37(a)(1)(i)-(iii) (emphasis added). Further, 40 C.F.R. § 412.37(a)(2) provides *additional* requirements for all "open surface liquid impoundments," namely a depth marker that "clearly indicates the minimum capacity necessary to contain the runoff and direct precipitation of the 25-year, 24-hour rainfall event." 40 C.F.R. § 412.37(a)(2).

CAFOs are also subject to corresponding record keeping requirements for the production area. Each CAFO must maintain on-site for a period of five years from the date they are created a complete copy of the records documenting the inspections required under paragraph (a)(1). 40 C.F.R. § 412.37(b)(1). CAFOs *must additionally* keep weekly records of the depth of the manure and process wastewater in the liquid impoundment as indicated by the depth marker under paragraph (a)(2). 40 C.F.R. § 412.37(b)(2). The requirements to (1) conduct weekly visual inspections of "manure, litter, and process wastewater impoundments" *generally* and maintain records of these inspections, and (2) use a depth marker in "open surface liquid impoundments" and maintain records of the depth of manure and liquid wastewater are separate and distinct requirements.

(b) There is no lawful basis for MDE to only require records of inspections every three-months for dry animal waste operations.

Part IV of MDE's General Discharge Permit outlines the "Special Conditions" for permitted CAFOs. Section A pertains to "Operation of Animal Waste Storage and Distribution Systems. As defined in the Permit, "Animal Waste" refers to "liquid and/or solid waste from animal feeding, milking, holding, or other animal operations. Animal waste includes all manure, **poultry litter**, offal, and **process wastewater**." *See* Permit Part II.B. In part, Part IV.A.2 provides: "Any impoundment storing *liquid animal waste* shall be equipped with a depth measuring device visible from the outside or bank of the storage area which indicates the maximum depth at which the 25-year, 24-hour storm can be contained." Permit Part IV.A.2. This conforms to the federal requirement in 40 C.F.R. § 412.37(a)(2) for depth markers in open surface liquid impoundments. However, the Permit fails to adhere to the requirements when it states in Part IV.A.3: "**Liquid animal waste** impoundments shall be inspected on a *weekly basis* to record the depth of the manure and process wastewater as indicated by the depth marker." Permit Part IV.A.3. In regards to the corresponding recordkeeping requirements under the federal regulations, Part IV.6(b)(4) provides for documentations of inspections conducted of the animal waste storage areas (i) *weekly* for liquid animal waste operations, but only (ii) *once every three months* for dry animal waste operations. Permit Part IV.A.6(b)(4)(i)-(ii). MDE thus makes a distinction between the visual inspection and recordkeeping requirements for *liquid* animal waste operations and *dry* animal waste operations. Under MDE's permit, the required weekly inspections and recordkeeping applies only to liquid animal waste impoundments, rather than to all manure, litter, and process wastewater impoundments.

This discrepancy was already noted in several public comments, including those from the Maryland Clean Agriculture Coalition and the Environmental Integrity Project (EIP). *See* Maryland Clean Agriculture Coalition public comment, at MDE – 000121 ("Given the fact that agricultural pollution remains the primary source of nutrient pollution to the Bay and Maryland waters, there is no justification for this proposed weakening of the inspection requirements."). In fact, EIP found the Permit to be "wholly inadequate" in more than one of its inspection requirements, specifically noting the many environmental problems associated with improperly stockpiled manure and litter. *Id.*,at MDE – 00103. In fact, MDE's original Proposed Permit was already found to be legally deficient upon review. EIP correctly noted that

the Proposed Permit eliminated the requirement that CAFOs and MAFOs "conduct weekly inspections of the animal waste storage areas and storm water routing structures." *Id.*, at MDE – 000104. EPA's ELGs under 40 C.F.R. § 412.37(i) minimally requires weekly inspections of all storm water diversion devices, runoff diversion structures, and devices channeling contaminated storm water to the wastewater and manure storage and containment structure. *Id.* MDE admitted that the Proposed Permit was, in fact, inadequate under 40 C.F.R. § 412.37(a)(1)(i) and accordingly "Changed the requirement to document inspections of storm water routing structures once annually for dry animal waste operations to once weekly." Response to Public Comments Regarding General Discharge Permit for Animal Feeding Operations, NPDES Permit #MDG01, State Discharge Permit #14AF [hereinafter Response to Public Comments], Maryland Department of the Environment (Nov. 20, 2014), at MDE – 000083 ("To ensure consistency with federal regulations, the inspection frequency for storm water routing structures at AFOs with dry manure handling systems will be revised to weekly."); *Id.*, at MDE – 000076-77.

MDE chose to ignore, however, the important comments further noting that EPA's regulations require CAFOs to conduct weekly inspections of the manure, litter, and process wastewater impoundments. *Id.* at MDE – 000105. The *AFO Factsheet Final Determination* notes that the animal waste storage and storm water routing structure inspection requirements had actually been weakened in the newly issued Permit: "For dry animal waste operations, the frequency for inspection of animal waste storage areas was changed from weekly to once every three months." *CAFO Fact Sheet Supplement, General Discharge Permit for Animal Feeding Operations, NPDES Permit No. MDG01; State Discharge Permit No. 14AF*, Maryland Department of the Environment, MDE - 000042. Furthermore, the original Proposed Permit contained an even more relaxed standard, requiring inspections of dry animal waste operations only once annually. Upon receiving notice from several public comments that this annual inspection was legally deficient given the weekly inspection requirement, however, in using the final Permit MDE aimlessly created a concession of only three-months for inspections of animal waste storage areas for dry animal waste operations. Response to Public Comments, at MDE – 000075.

In its *Response to Public Comments*, MDE justified this mere three-month period by arguing that the requirement of weekly inspections of manure, litter, and process wastewater impoundments under 40 C.F.R. § 412.37(a)(1)(iii) applied only to *liquid* animal waste systems where impoundments are used. *Id.*, at MDE – 000083. They argued that the federal regulations "contain no particular frequency for inspections of dry manure storage structures, such as sheds, other than to the state that the inspections of the CAFO production area must be 'routine.'" *Id.* This justification is untenable. MDE took the header language in 40 C.F.R. § 412.37(1) requiring "routine visual inspections of the CAFO production area" and ignored the specifically listed intervals for visual inspections in (i)-(iii) that require *weekly* visual inspections for "manure, litter, and process wastewater impoundments." 40 C.F.R. § 412.37(1)(i)-(iii). Moreover, MDE created its own arbitrary distinction between liquid and dry waste – citing to no official record or federal regulation – in arguing that liquid impoundments are more subject to overflows and failures than sheds used to store dry manure. *Id* The three-month concession and MDE's defense of it was not grounded in any legally defensible position and is in direct contravention of clearly stated federal requirements.

(c) MDE's position is not supported by a natural reading of the federal regulations and inconsistent with the Zero Discharge effluent limitation for CAFO production areas.

MDE's distinction between the visual inspections requirements for dry manure storage structures and liquid impoundments is arbitrary and not supported by a natural reading or understanding of the language in the federal regulations. The weekly visual inspection requirement is intended to encompass *both* dry and liquid systems, with the provision for an additional depth marker requirement in place for *liquid* impoundments specifically. This is supported by (i) a natural reading of the federal regulations and corresponding definitions, and (ii) a basic understanding of the purpose behind imposing visual inspections to meet ELGs.

The language in 40 C.F.R. § 412.37(a)(iii) has two independent clauses: first, "Weekly inspections of the manure, litter, and process wastewater impoundments;" and second, "…the inspection will note the level in liquid impoundments as indicated by the depth marker in paragraph (a)(2) of this

section." The first clause requires weekly inspections of the "manure, litter, and process wastewater impoundments" *generally*. The second clause specifically targets "liquid impoundments" for the additional depth marker requirements. The designation of "liquid impoundments" would be superfluous in the second clause if the first clause were only intended to cover liquid impoundments. Rather, there is a general requirement for manure, litter, and wastewater impoundments and then a specific requirement for liquid impoundments. The weekly inspection of "manure, litter, and process wastewater impoundments" is required regardless of whether the impoundment is liquid, whereas the depth marker is only required for liquid impoundments. If "manure, litter, and process wastewater impoundments" in the first clause referred exclusively to liquid impoundments, there would be no reason to specifically designate the depth marker requirement for liquid impoundments in the second clause.

This is further supported by the corresponding record keeping requirements for the production area under 40 C.F.R. § 412.37(b). This provision requires (1) "Records documenting the inspections required under paragraph (a)(1) of this section" and (2) "Weekly records of the depth of the manure and process wastewater in the *liquid impoundment* as indicated by the depth marker under paragraph (a)(2) of this section." 40 C.F.R. § 412.37(b)(1)-(2). The record requirements for impoundments generally are distinct from the additional record requirements for liquid impoundments.

Moreover, the words "manure, litter, and process wastewater" are frequently used together throughout the federal regulations, referring to both dry and liquid waste and in reference to storage facilities generally. In fact, "liquid impoundments" by definition is only one subset of manure storage facilities. The "production area" – management of which this section of the Permit regulates – is defined to include "that part of an AFO that includes the animal confinement area, the manure storage area, the raw materials storage area, and the waste containment areas." 40 C.F.R. § 412.2(h). Within this definition, "manure storage area" includes "lagoons, runoff ponds, storage sheds, stockpiles, under house or pit storages, *liquid impoundments*, static piles, and composting piles." *Id.* (emphasis added). "Liquid impoundment" is a specific type of manure storage area, further demonstrating that the general usage of manure storage area includes all types of manure storage, with liquid impoundments referring to a

specific type of manure storage. Importantly, this designation is not used in the language of 40 C.F.R. § 412.37(a)(iii), which refers to "manure, litter, and process wastewater impoundments," *not* "liquid impoundments." Thus, the language of the regulations is clear on their face that the weekly requirement applies both to liquid and dry waste.

Furthermore, beyond being arbitrary, MDE's haphazard justification of weakened inspections for dry waste is entirely inconsistent with the purpose of the requirements. Weekly visual inspections of storage structures are critical provisions meant to ensure that production areas are being properly maintained under the CWA. The high concentration of nutrients in these storage areas and the potential for improperly stockpiled manure and litter as well as accidental releases pose serious threats to water quality. As noted above, the production area must be designed, constructed, operated and maintained to contain *all* "manure, litter, and process wastewater." The effluent limitation provided for production areas in 40 C.F.R. § 412.31(a) is zero: "…there may be no discharge of manure, litter, or process wastewater pollutants into waters of the U.S. from the production area." 40 C.F.R. § 412.31(a). One exception is:

> (1) Whenever precipitation causes an overflow of manure, litter, or process wastewater, pollutants in the overflow may be discharged into U.S. waters provided:
>
> (i) The production area is designed, constructed, operated and maintained to contain *all* manure, litter, and process wastewater including the runoff and direct precipitation from a 25-year, 24-hour rainfall event;
>
> (ii) The production area is operated in accordance with the additional measures and records required by § 412.37(a) and (b).

40 C.F.R. § 412.31(a)(1)(i)-(ii) (emphasis added). In sum, the production area must contain *all* manure, litter, and process wastewater. There is no distinction between liquid or dry waste. There is no distinction between whether the discharge results from liquid or dry waste.

In explaining the requirement of adequate manure, litter, and wastewater storage, the *NPDES Permit Writers' Manual for CAFOs* clarifies that typical Operation and Maintenance ("O&M") activities for storage structures include inspections "to confirm they are maintaining adequate storage capacity. Regulations at 40 CFR § 412 require weekly inspections for Large permitted subpart C and D CAFOs."

NPDES Permit Writers' Manual for CAFOs, at MDE – 001412. There is no comparison of the relative risks of overflow or runoff between dry and liquid systems and how this may change the required frequency of visual inspections. *Id.*, at MDE 001419-20 ("The storage capacity of a solid manure storage structure should consider the frequency at which manure is removed from confinement areas to the storage structure and frequency at which manure will be removed from the storage structure for land application or off-site transfer. Because all water that contacts raw materials, products, or by-products, including manure and litter, is considered to be process wastewater, CAFOs must manage runoff from any solid manure storage areas that are exposed to precipitation."). The ELGs for the CAFO production area contemplate the risks of runoff from solid manure storage structures and recognize the need to inspect such facilities:

> *All manure storage structures* must be operated and maintained to prevent the discharge of pollutants into waters of the U.S. *Frequent overflows are a potential indicator that a CAFO is not meeting its permit obligations to ensure adequate storage and to properly operate and maintain the facility*. In general, the records maintained by the operator help determine whether proper O&M has been performed. *Id.*, at MDE 001419-20 (emphasis added).

For this reason, all CAFO operations must regularly inspect the manure storage structures to identify and correct problems with structural integrity and storage capacity before a discharge occurs. Accordingly, "The ELG regulations require that permitted Large CAFOs conduct weekly inspections of all manure, litter, and process wastewater impoundments. 40 CFR § 412.37(a)(1). In addition to periodic inspections, manure levels in a storage structure must be monitored and recorded weekly." *Id.,* at MDE – 001422-23. This refers to storage structures generally. The Manual then goes on to explain that the ELG requires "weekly recording of manure and wastewater levels in all liquid impoundments. 40 CFR § 412.379b)(2)." *Id.* Again, the weekly inspections of all manure, litter, and process wastewater impoundments and recordings ensure the proper storage capacity of storage structures generally, with an additional requirement for liquid impoundments.

In fact, one of the major revisions to the 1976 NPDES regulations was to include AFOs with chickens "regardless of the type of waste disposal system used or whether the litter or manure is managed

in a wet or dry form." *Development Document for the Final Revisions to the National Pollutant Discharge Elimination System Regulation and the Effluent Guidelines for Concentrated Animal Feeding Operations*, U.S. Environmental Protection Agency (Dec. 2002), at MDE – 000468. Including dry manure systems in the final rule was supported by MDE and endorsed by the American Society of Agronomy, the Crop Science Society of America, the Soil Science Society of America, and members of SERA-17. *Id.* at MDE – 002501-2507. Similarly, a supplement to the NPDES Permit Writer's Guidance Manual and Example Permit for CAFOs explicitly states: "The type of manure handling system is used only to determine whether an operation is defined as a Large or Medium CAFO. *It does not affect which ELG applies. Therefore, the ELGs for poultry operations with wet systems are the same as the ELGs for operations with dry systems*." *CAFO Questions and Answers, Supplement to the NPDES Permit Writers' Guidance Manual and Example Permit for CAFOs* (Dec. 31, 2003), at MDE – 002572 (emphasis added). Visual inspections are essential to help establish that CAFO production areas are being properly maintained.[58] As noted above, when not managed correctly, the nutrients in animal manure – particularly in the form of phosphorus and nitrogen – can cause eutrophication of water. *Development Document for the Final Revisions to the National Pollutant Discharge Elimination System Regulation and Effluent Guidelines for Concentrated Animal Feeding Operations*, U.S. Environmental Protection Agency (Dec. 2002), at MDE – 000653. As a result of nutrient enrichment caused by increased sediment and nutrient loading in the water, the biomass of the water body increases and "produces a noxious environment that accelerates algae growth, leading to a reduction in water quality." *Id.* These are precisely the conditions that have permitted agricultural contributions to diminished water quality in the Bay to increase, particularly on the Eastern shore where CAFOs are located.

[58] *NPDES Permit Writers' Manual for CAFOs*, at MDE – 001366 ("To ensure that a facility meets the no-discharge standard, the CAFO must ensure that the production area has adequate storage structures that are designed, constructed, operated, and maintained to contain all manure including the runoff and direct precipitation from a 25-year, 24-hour rainfall event. An important consideration as to whether a CAFO meets the ELG requirements is whether it has adequate storage or treatment structures capable of containing all manure, litter, and process wastewater that accumulates during the critical storage period…To meet the no-discharge requirement, the CAFO must operate the production area in accordance with additional measures and record-keeping requirements specified in 40 CFR parts 412.37(a)-(b), 412.47(a)-(b).").

II. The General Permit is legally deficient because it fails to require effluent monitoring to assure compliance with permit limitations as required by 40 C.F.R. 122.44(i)(1).

MDE's General Permit is legally deficient because it fails to include the effluent monitoring required by 40 C.F.R. 122.44(i)(1). Section 122.44(i)(1) requires all NPDES permits to include, when applicable, certain monitoring and reporting requirements designed to "assure compliance with permit limitations…" 40 C.F.R. § 122.44(i)(1). In order to comply with this monitoring mandate, EPA has rightfully required water quality monitoring for all permitted point sources of pollution so that compliance with permit limits can be properly ascertained. While MDE's General Permit incorporates clear discharge limitations on production areas from both the Federal ELGs and the Chesapeake Bay TMDL, the permit is devoid of *any* monitoring requirements to determine whether the CAFO operator is in compliance with these limits. As such, permit compliance can never be determined and CAFO operators can never be held accountable for violations of the Zero Discharge production area limitation. This lack of accountability and compliance assurance has rendered CAFO permits hollow paper exercises where Zero Discharge is simply an empty gesture, as clearly evidenced by the ongoing load of pollution coming off these facilities and destroying the Bay. By failing to mandate the monitoring required by 122.44(i)(1), MDE's General Permit is legally deficient.

(a) The General Permit implements specific and strict limitations that must be achieved in order for the permit to be incompliance with the CWA.

MDE's General Permit implements effluent limitations for production areas stemming from both the federal minimum ELGs promulgated by EPA and applicable water quality standards mandated by EPA's Bay TMDL and Maryland's WIP. The EPA promulgated, and MDE adopted in the General Permit, a strict Zero Discharge effluent limitation that prohibits any discharge of manure, litter, or process wastewater from the production area of a CAFO into the waters of the United States. 40 C.F.R. § 412.43(a)(1); General Permit, Part (I)(B), *Authorized Discharge,* at MDE - 000005; "The only exception to this zero discharge standard occurs when there is a discharge as a result of 25 year, 24 hour rainfall event." *Assateague Coastkeeper,* 200 Md. App. 665, 674-75, citing 40 C.F.R. §§ 412.43(a)(1), 412.2(i). To achieve the Zero Discharge effluent limitation in production areas the

General Permit mandates "best management practices" (BMPs) consisting of facility design parameters, operational guidelines, and recording keeping obligations. 40 C.F.R. § 412.31(a)(1)(i). As described earlier, the Permit also requires that CAFO production areas operate in accordance with the additional measures required by 40 C.F.R. § 412.37(a) and (b). 40 C.F.R. § 412.31(a)(1)(ii).

The General Permit is not lawful if the terms contained therein do not result in a discharge that is at least as stringent as the EPA's Zero Discharge effluent limitation. 33 U.S.C. § 1370; Md. Code Ann., Envir. § 9-314(c). *Nw. Land Corp.*, 104 Md. App. 471, 479 (1995) (stating that "MDE's effluent standards must be at least as stringent as the federal standards."). 40 C.F.R. 122.44(i)(1) requires MDE's General Permit to include effluent monitoring necessary to "assure" that the myriad requirements set out in the permit actually result in discharges that are in compliance with the Permit's stringent technology-based Zero Discharge performance standard. 40 C.F.R. § 122.44(i)(1). The monitoring requirements embodied in the regulations cannot be met by simply any inadequate, non-monitoring substitute that an agency may claim suffices; the provisions are very specific. 40 C.F.R. § 122.41(j)(1) describes monitoring "conditions applicable to all permits" issued under the CWA. This provision states that, "samples and measurements taken for the propose of monitoring shall be representative of the monitored activity."

Additionally, to achieve the water quality standard required by EPA's Chesapeake Bay TMDL, Maryland has adopted a Watershed Implementation Plan (WIP) that implements additional limitations on discharges from all CAFO point sources.[59] These water quality standards mandate reductions in effluent discharges sufficient to achieve Final Target Loads by 2020. Specifically, Maryland's WIP mandates that CAFOs and MAFOs must achieve a combined Final Target Load of 619,000 pounds per year for nitrogen and 90,000 pounds per year for phosphorus.[60] To achieve these 2020 Final Target loads, CAFOs and MAFOs combined must reduce nitrogen discharge by 34.1% and phosphorus discharge by 51.8% from

[59] Maryland's Phase II Watershed Implementation Plan for the Chesapeake Bay Total Maximum Daily Load, at 13, 16 (Oct. 26, 2012).
[60] *Id.*

2010 levels.[61] Maryland has determined that these effluent limitations must be achieved if the State's water quality is to come into compliance with Chesapeake Bay TMDL by 2020.[62]

If the terms of the permit do not achieve the Zero Discharge effluent limitation mandated by the permit then the permit is not in compliance the Bay TMDL and is therefore unlawful. 40 C.F.R. 122.4(d). Accordingly, 40 C.F.R. 122.44(i)(1) requires MDE's General Permit to include sufficient effluent monitoring to assure that the myriad requirements set out in the permit actually result in discharges that are in compliance with requirements of the applicable water quality standards established pursuant to the Bay TMDL/Maryland WIP.

(b) MDE's Permit fails to include the mandatory monitoring program designed to assure compliance with the permit limitations as required by 40 C.F.R. § 122.44(i).

MDE's General Permit is legally deficient because it fails to mandate the effluent monitoring necessary to assure compliance with the limitations of the permit, despite the federal requirement to do so and the importance of achieving these limits. 40 C.F.R. 122.44(i). Section 122.44(i)(1) requires all NPDES permits to include, when applicable, certain monitoring and reporting requirements designed to "assure compliance with permit limitations…" 40 C.F.R. § 122.44(i)(1). These federal requirements include, *inter alia*, "requirements to monitor" "the mass (or other measurement specified in the permit) for each pollutant limited in the permit" as well as "the volume of effluent discharged from each outfall." 40 C.F.R. § 122.44(i)(1)(i), (ii). For the monitoring program, the General Permit must specify the "type, intervals, and frequency [of sampling] sufficient to yield data which are representative of the monitored activity including, when appropriate, continuous monitoring." 40 C.F.R. §§ 122.48(b), 122.44(i)(1)); *Riverkeeper*, No. 2199 SEPT.TERM 2013, 2015 WL 1510556, at *13 (Md. Ct. Spec. App. Apr. 2, 2015) (The Act requires that a state permit specify the "type, intervals, and frequency sufficient to yield data which are representative of the monitored activity."). The monitoring methodology required by 40 C.F.R. 122.44(i)(1) is set out in 40 C.F.R. Part 136. 40 C.F.R. § 122.44(i), (iv). Permits that properly implement the assurance-monitoring program require measuring water for, *inter alia,* pH, nitrogen, phosphorus,

[61] *Id.*
[62] *Id.*

temperature, and total suspended solids.[63] Additionally, the General Permit, like all NPDES permits, must specify "[r]equirememts concerning the proper use, maintenance, and installation, when appropriate, of monitoring equipment or methods." 40 C.F.R. § 122.48(a). Monitoring results must be reported "on a frequency dependent on the nature and effect of the discharge, but in no case less than once a year." 40 C.F.R. § 122.44(i)(2).

The General Permit violates the CWA because it does not require that MDE or the CAFO Operator conduct this mandatory assurance monitoring. The only oversight requirements for production areas found in the General Permit are those visual inspections and attendant recordkeeping obligations required by the BMPs. *See* General Permit, MDE – 000003 – 000029. In addition to the fact that monitoring levels of microscopic pollutants through visual inspections is a physical impossibility, the Regulations do not contemplate visual inspections for the monitoring required by 122.44(i)(1); assurance monitoring must be done in accordance with 40 C.F.R. Part 136. 40 C.F.R. § 122.44(i)(1)(iv). By continually failing to implement the proper assurance-monitoring requirement, MDE's CAFO permitting program has never been able to assure compliance with the CWA, the Regulations, or the applicable water quality. Because of this failure, pollution from CAFOs not only remains the most significant single source of pollution for the Chesapeake Bay, but pollution from CAFOs is actually increasing year after year.[64]

(c) The monitoring requirements in 40 C.F.R. § 122.44(i)(1) are mandatory.

The monitoring requirements set out in 40 C.F.R. § 122.44(i)(1) must be included in all NPDES permits. Section 122.44(i)(1) is found in 40 C.F.R. Part 122, *EPA Administered Permit Programs: The National Pollutant Discharge Elimination System.* The regulations found in Part 122 are required to be

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[63] CA, NCR, Permit, *Attachment E – Monitoring and Reporting Program* at E-4, *available at http://www.waterboards.ca.gov/northcoast/water_issues/programs/dairies/pdf/120127/npdes/120127_12_0001_NPDES_CAFO.pdf*

[64] John Rhoderick, Program Manager of Resource Conversation Operations, *Maryland's TMDL Process and the Role for Agriculture: WIP Phase II Summary* (April/May 2013), *available at* http://www.mde.state.md.us/programs/Water/TMDL/TMDLImplementation/Documents/Regional_Meetings/Spring2013/Agricultural_Progress_and_Assistance.pdf

included in every NPDES permit, when applicable, regardless of the particular category of point source. 40 C.F.R. § 122.44, *Establishing limitations, standards, and other permit conditions* (Stating, "[E]ach NPDES permit shall include conditions meeting the following requirements when applicable."). The terms of MDE's permit are required to result in strict and specific effluent limitations in order to be in compliance with federal law. Nevertheless, MDE declined to implement the monitoring required to assure that these limitations were being achieved. MDE, *Response to Public Comments,* at MDE-000084. We urge the court to remand the permit so that MDE can reissue the permit to include the monitoring requirements of 122.44(i)(1) as mandated by the Federal Regulations.

(d) MDE cannot rely on BMPs in lieu of the monitoring required by 40 C.F.R. § 122.44(i).

The utilization of non-numeric Best Management Practices (BMPs) does not excuse the General Permit from compliance with 40 C.F.R. § 122.44(i). *See Id.* ("The BMPs and NMPs required by the GD Permit are adequately protective of the environment without the need for downstream water sampling for all permittees.") 40 C.F.R. Part 412, *Concentrated Animal Feeding Operations (CAFO) Point Source Category,* sets out the minimum BMP requirements that must be included in all CAFO NDPES Permits. Part 122, *EPA Administered Permit Programs: The National Pollutant Discharge Elimination System* sets out, *inter alia*, the assurance monitoring required of all NDPES permits, regardless of the point source category. 40 C.F.R. Part 122, *EPA Administered Permit Programs: The National Pollutant Discharge Elimination System.* The EPA has recognized the important role of 122.44(i) assurance monitoring in permits that implement BMPs rather than numeric effluent limitations.[65] Part 412 (BMPs) and Part 122 (including 122.44(i) assurance monitoring) are both applicable requirements of the promulgating regulations and a NPDES permit covering CAFOs must comply with both parts. 40 C.F.R. § 122.4(a) ("No permit may be issued when the conditions of the permit do not provide for compliance with the

[65] National Pollutant Discharge Elimination System Application Deadlines, General Permit Requirements and Reporting Requirements for Storm Water Discharges Associated With Industrial Activity, 57 FR 11394-01, at 11401 ([In permits that utilize BMPs] effluent monitoring data can still play an important role in identifying priority facilities, providing information on sources and types of pollutants which can be evaluated when designing or modifying best management or pollution prevention practices, and evaluating the effectiveness of best management practices and pollution prevention measures.)

applicable requirements of CWA, or regulations promulgated under CWA.")(Internal punctuation omitted).

It should also be noted that in no other CWA permitting circumstances do practices and technologies used to limit discharges of pollutants from point source take the place of monitoring those discharges to ensure that those practices and technologies are indeed effective. For example, industrial point sources are subject to a "Best Available Technology" standard that require these facilities to implement up-to-date technology to minimize discharges. The compliance with BAT does not excuse those facilities from conducting regular sampling to ensure that these technologies are in fact working. Likewise, a series of BMPs on point source CAFOs does not assure compliance; only monitoring can achieve the mandates of the regulations.

(e) The General Permit cannot rely on a discretionary effectiveness monitoring program

Pursuant to 40 C.F.R. § 122.28, Maryland has elected to establish a single General Permit that regulates all CAFOs in the state. General Permit, *Preamble,* at MDE – 000003. Under a lawful permit, 40 C.F.R. § 122.44(i)(1) assurance monitoring would be preformed at every CAFO in Maryland. Instead of mandating the required assurance monitoring for every CAFO, the General Permit only implements a completely discretionary program designed to "determine whether there is a discharge…from…production areas." General Permit, Part I(A)(1)-(4), at MDE - 000003 (Stating "[T]he Department may notify the permittee and require submittal of a sampling plan…"). Because the monitoring required by the General Permit is discretionary, not a single CAFO in Maryland has the duty to perform the assurance monitoring required by the Regulations unless MDE feels its necessary. *Id.* As indicated in Petitioner's public comments, Petitioners are unaware of a single instance where MDE has exercised its discretion and actually required sampling to determine the effectiveness of the terms of the permit. MDE – 000106.

The Regulations do not contemplate an assurance monitoring program that is subject to the whim of the implementing agency; the Regulations state that each NPDES permit *shall* include monitoring requirements "to assure compliance with permit limitations…" 40 C.F.R. 122.44(i) (emphasis added). In

permits that correctly implement the monitoring requirements of 40 C.F.R. § 122.44(i), the sampling is mandatory and performed by the operator.[66] This requirement is critical to assure that every CAFO production area achieve Zero Discharge. Without the mandatory monitoring program required by 40 C.F.R. 122.44(i), the General Permit is legally deficient. 33 U.S.C. § 1342(a)(1); 40 C.F.R. § 122.4(a), (d).

(f) MDE creates a "strawman" in "downstream sampling."

MDE's response to the public comments reveals their decision to ignore federal requirements is motivated by "the potential difficulty of tracing downstream pollution back to particular AFOs." MDE *Response to Public Comments,* at MDE-000084. First of all, the Regulations simply do not contain hardship exemptions for the monitoring required by 40 C.F.R. 122.44(i)(1). Second, although "downstream sampling" might indeed be sufficient to assure the terms of the permit are resulting in the required effluent discharge as required by 122.44(i), it is by no means the only method. For example, the CAFO NPDES Permit issued by the California Regional Water Quality Control Board, North Coast Region, requires the Operator to conduct mandatory surface water sampling a minimum of three times a year. The Operator is required to take grab samples from watercourses "at the point where the watercourse leaves the property."[67] CAFO production areas are designed to carry wastewater into ditches surrounding the production area. Sampling taken in these ditches, just feet from the surfaces of the production area, might also provide adequate sampling. In fact, this is how those concerned with CAFO pollution actually monitor production area discharges. Today, compliance data has to be collected privately because there is no official data due to the failure by MDE to implement 122.44(i).[68]

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[66] *E.g.* CA, NCR, Permit, *Attachment E – Monitoring and Reporting Program* at E-4, *available at http://www.waterboards.ca.gov/northcoast/water_issues/programs/dairies/pdf/120127/npdes/120127_12_0001_NPDES_CAFO.pdf*

[67] *Id.*

[68] For an example of a citizen suit based on privately collected water samples from the ditches surrounding CAFO production areas, *see Assateague Coastkeeper v. Alan & Kristin Hudson Farm*, 727 F. Supp. 2d 433, 435 (D. Md. 2010).

Conclusion

Every NPDES permit must include terms that ensure permitted discharges comply with all provisions of the CWA, the federal regulations, and the applicable water quality based effluent limitations. 33 U.S.C. § 1342(a)(1); 40 C.F.R. § 122.4(a), (d); *Assateague Coastkeeper,* 200 Md. App. 665, 674-75. Every NPDES permit must also include monitoring and reporting programs designed to assure the terms of the permit are in compliance with permit limitations. 40 C.F.R. § 122.44(i)(1). Accordingly, MDE's General Permit must include monitoring and reporting to assure that the myriad requirements set out in the permit actually result in discharges that are in compliance with the Regulation's technology-based "Zero Discharge" effluent limitation *as well as* the very specific water quality standards established by the Maryland pursuant to the Bay TMDL. 33 U.S.C. § 1342(b)(1)(A); 40 C.F.R. §§ 122.4(a),(d), 123.25(a).

Meeting the limitations established in this permit is absolutely essential to bring Maryland's water quality standards into compliance with the EPA's Bay TMDL. Given the importance of achieving the limitations in the permit, the regulations require monitoring programs capable of assuring the terms of the permit are achieving the effluent limitations dictated by the permit. The failure by MDE to include the minimum federal requirements in the General Permit renders the permit unlawful and the court should remand the permit back to MDE.

Respectfully submitted,

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